

REMARKS

In response to the Final Office Action mailed October 24, 2008, Applicant respectfully requests reconsideration. Claims 1-25 and 27-30 were previously pending in this application. In this paper, claims 1-7, 11, 12, 14, 21, 22, 24 and 25 have been amended. No claims have been added or cancelled. As a result, claims 1-25 and 27-30 are pending for examination with claims 1, 11 and 21 being independent claims. No new matter has been added.

I. Summary of Telephone Interview with the Examiner

Applicant's representative, Edmund Walsh, thanks Examiner Baturay for her courtesy in granting and conducting the telephone interview held on December 15, 2008. During the telephone interview, Applicant's representatives and the Examiner discussed the proposed response sent to the Examiner and issues raised in the Office Action mailed on October 24, 2008.

During the interview, the Examiner questioned where support for amendments to claim 2 may be found in the specification. Please note that FIG. 5 labels steps of a method, with step 1a (or step 1b) indicating receiving a second network address, which occurs prior to step 2a of registering. Subsequent to step 2a of registering, FIG. 5 illustrates a step 3a of issuing a first binding update.

The claim amendments and remarks presented herein may serve as further summary of the telephone interview.

II. Overview of the Disclosure

As an aid to the Examiner, Applicant provides a brief summary of the application. This summary is not intended as a substitute for the Examiner reading the application in its entirety and is not intended to characterize the claims or any terms used in the claims, which are discussed individually below.

Briefly, the present application describes a method and system that allows mobile network nodes to maintain network connectivity with a corresponding node even after the corresponding node and / or mobile node's assigned network address changes. The mobile node can register its new address with an authoritative name server and does not rely upon a home agent (page 5, lines 1-

20). Naming requests for the mobile node are resolved by reference to name / address resolution information maintained in the authoritative name server (page 17, lines 4-6).

When a mobile node moves from one location to another, a policy stored in the mobile node determines if the mobile node has moved outside the security domain of the mobile node's home network (page 19, lines 3-13). The policy can include network addresses of the mobile node's home network. After a determination is made that the mobile node has moved outside the security domain of the mobile node's home network, a tunnel connection is established with a virtual private network (VPN) server and the VPN server then provides a new address for the mobile node (page 19, lines 13-24). The mobile node registers its new address with an authoritative name server with instructions not to cache the address by specifying a Time To Live (TTL) value of zero (page 21, lines 1-6). The mobile node then sends a binding update to the corresponding node. If the corresponding node has also moved, the binding update will fail and the mobile node will subsequently query its authoritative name server for the corresponding node's new address. After acquiring the new address from the corresponding node's authoritative name server, the mobile node's authoritative name server returns the new address of the corresponding node to the mobile node. The mobile node, utilizing the new address for the corresponding node, then successfully issues another binding update (col. 21, lines 7-25).

III. Rejections Under 35 U.S.C. §103

Claims 1, 2, 8, 10-12, 18 and 20 were rejected under 35 U.S.C. §103(a) as purportedly being obvious over U.S. Patent No. 6,904,466 (hereinafter "Ishiyama") and further in view of U.S. Patent No. 7,116,654 (hereinafter "Kim").

Claims 3, 6, 7, 13, 16, 17, 21-23, 27, 28 and 30 were rejected under 35 U.S.C. §103(a) as purportedly being obvious over Ishiyama in view of Kim and further in view of U.S. Patent No. 6,452,920 (hereinafter "Comstock").

Claims 4 and 14 were rejected under 35 U.S.C. §103(a) as purportedly being obvious over Ishiyama in view of Kim and further in view of U.S. Patent Publication No. 2003/0211842 (hereinafter "Kempf").

Claims 5 and 15 were rejected under 35 U.S.C. §103(a) as purportedly being obvious over Ishiyama in view of Kim in view of Kempf and further in view of U.S. Patent Publication No. 2003/0018810 (hereinafter “Karagiannis”).

Claims 9, 19 and 29 were rejected under 35 U.S.C. §103(a) as purportedly being obvious over Ishiyama in view of Kim in view of Comstock and further in view of U.S. Patent No. 6,434,627 (“Millet”).

Claim 24 was rejected under 35 U.S.C. §103(a) as purportedly being obvious over Ishiyama in view of Kim in view of Comstock and further in view of Kempf.

Claim 25 was rejected under 35 U.S.C. §103(a) as purportedly being obvious over Ishiyama in view of Kim, Comstock and Kempf and further in view of Karagiannis.

Applicant respectfully traverses the rejections.

A. Discussion of Ishiyama

Ishiyama is related to a mobile communication scheme for mobile nodes without using home agents (Abstract). In Ishiyama, a mobile computer maintains communication with a correspondent node by transmitting a packet having the home address as an original source address and an outer packet having a current location address (or “Care of Address”) as a source address (Abstract, Fig. 4, col. 8, lines 50-65). Thus, upon receiving the transmitted packet, the correspondent node will know the destination and final destination address of a packet that needs to be transmitted to the mobile computer. When the mobile computer moves to a new address, the mobile computer notifies the DNS server of the new address and the current location address in the outer packet changes to the new updated Care of Address (COA) (col. 8, lines 8-58; col. 9, lines 11-26).

B. Discussion of Kim

Kim is related to a routing optimization method for a mobile internet protocol system. A mobile host is assigned a COA when it connects to the Internet from a changed point of attachment (Abstract). Subsequently, the mobile host sends a registration request containing the COA to the mobile host’s home agent via a foreign agent (Abstract). The home agent then stores the COA in relation to a domain name of the mobile host in an internal domain name server (DNS). When a

correspondent node queries the home agent, the home agent sends the COA corresponding to the domain name along with caching prevention information to the correspondent node. The caching prevention information prevents the correspondent node and other DNS from caching the COA of the mobile host (col. 2, lines 20-40).

C. Discussion of Comstock

Comstock is related to the use of Mobile IP binding information to deliver mobile terminating packets between a corresponding node and a mobile node using Layer-2 tunneling. A home agent within the home network and a foreign agent is a router that performs the Mobile IP functionality (col. 2, Lines 9-14). The home address and “care-of” address are registered with the home network (col. 2, Lines 15-25). Comstock does not mention whether or not the address is cached elsewhere within the network or that any values are specified to either cause or prevent such caching.

D. Independent Claim 1

Claim 1 recites, *inter alia*:

“registering the second address, for the mobile node, with an authoritative name server without using a home agent, wherein the registering step comprises:
specifying the second address for the mobile node; and
specifying a supplementary value that ensures the second address will not be cached within non-authoritative name servers.”

The Office Action alleges that it would have been obvious to one of ordinary skill in the art to modify Ishiyama in view of Kim in order to teach all limitations of claim 1. Applicant respectfully disagrees and respectfully submits that the combination of Ishiyama and Kim is not proper such that the Office Action fails to establish a *prima facie* case of obviousness.

Ishiyama and Kim have incompatible teachings and one of ordinary skill in the art would have no reason to combine them. As noted above in the discussion of Ishiyama, Ishiyama teaches

supporting communications between a mobile computer and a corresponding node without using a home agent by transmitting data packets with two addresses, namely, an original source address and a COA. By transmitting two addresses, a corresponding node will utilize the two addresses to send data packets to the mobile computer. Kim, on the contrary, teaches using home agents and foreign agents to allow communication between a mobile host and a correspondent node. As noted above, the home agent for the mobile host will receive queries for the mobile host and direct any control communications between the mobile host and the correspondent node. One of ordinary skill in the art would have no reason to combine the Ishiyama and Kim as Ishiyama explicitly teaches against using home agents and Kim explicitly teaches using home agents. Kim relies on a home agent to maintain connectivity between the mobile host and the correspondent node, where as Ishiyama's method is used in order to avoid home agents.

In view of the foregoing, the Office Action fails to satisfy the requirements for establishing a *prima facie* case of obviousness. Accordingly, claim 1 patentably distinguishes over Ishiyama and Kim, considered alone or in combination, and is in condition for allowance. Withdrawal of the rejection of claim 1 is respectfully requested.

Claims 2-10 depend from claim 1 and are patentable based at least upon their dependency.

E. Independent Claim 11

Claim 11 recites, *inter alia*:

“registering the second address, for the mobile node, with an authoritative name server without using a home agent, wherein the registering step comprises:
specifying the second address for the mobile node; and
specifying a supplementary value that ensures the second address will not be cached within non-authoritative name servers.”

As can be appreciated from the discussion above, there is no reason for one of ordinary skill in the art to combine Ishiyama and Kim. Accordingly, claim 11 patentably distinguishes over

Ishiyama and Kim, considered alone or in combination. Therefore, withdrawal of the rejection of claim 11 is respectfully requested.

Claims 12-20 depend from claim 11 and are patentable based at least upon their dependency.

F. Independent Claim 21

Claim 21 recites, *inter alia*:

“determining, via a policy maintained by the mobile node, that the mobile node is located outside a security domain of a home network of the mobile node;

establishing a virtual private network tunnel connection through a virtual private network server, an address of the virtual private network server being specified by the policy;

receiving, from the virtual private network server, the second address for the mobile node;
and

registering the second address with an authoritative name server without using a home agent, wherein the registering step comprises:

specifying the second address for the mobile node; and

specifying a supplementary value that ensures the second address will not be cached within non-authoritative name servers.”

The Office Action alleges that it would have been obvious to one of ordinary skill in the art to modify Ishiyama and Kim in view of Comstock to arrive at a mobile network node meeting all limitations of Applicant’s claim 21. Applicant respectfully disagrees. As can be appreciated from the discussion above, one of skill in the art would have no reason to combine Ishiyama and Kim. Further combining Comstock compounds this error. Comstock teaches using home agents and foreign agents, while Ishiyama’s communication scheme explicitly teaches against the use of home agents. One of skill in the art would have had no reason to combine these incompatible references.

In addition to being improperly combined, Ishiyama, Kim and Comstock, considered alone or in combination, fail to teach or suggest all limitations of Applicant’s claim 21. For example, Comstock fails to teach or suggest “an address of the virtual private network server being specified by the policy” and “receiving, from the virtual private network server, the second address for the

mobile node,” as recited in Applicant’s claim 21. The Office Action contends that col. 3, lines 28-39 of Comstock teaches these limitations. However, neither the cited passage nor Comstock, considered as a whole, teaches a policy specifying an address of a VPN server.

Furthermore, Comstock teaches a mobile node receiving an address from a home network (col. 4, lines 7-28). In contrast, Applicant’s claim 21 recites a mobile node receiving an address from a VPN server. Ishiyama and Kim fail to cure these deficiencies because Ishiyama and Kim do not teach tunneling between a mobile node and a VPN server, as conceded by the Office Action.

In addition, Ishiyama fails to teach or suggest the “determining” limitation in Applicant’s claim 21 because Ishiyama does not teach a policy being maintained by the mobile node and/or determining, via the policy, that the mobile node is outside a security domain of a home network of the mobile node.

In view of the foregoing, Applicant respectfully submits that claim 21 patentably distinguishes over Ishiyama and Kim, considered alone or in combination, and is in condition for allowance. Withdrawal of the rejection of claim 21 is respectfully requested.

Claims 22-30 depend from claim 21 and are patentable based at least upon their dependency.

IV. Comments on Dependent Claims

Since each of the dependent claims depends from a base claim that is believed to be in condition for allowance, Applicant believes that it is unnecessary at this time to argue the allowability of each of the dependent claims individually. However, Applicant does not necessarily concur with the interpretation of the dependent claims as set forth in the Office Action, nor does the Applicant concur that the basis for the rejection of any of the dependent claims is proper. Therefore, Applicant reserves the right to specifically address the patentability of the dependent claims in the future.

Further, the dependent claims recite limitations that further distinguish the references. For example, claim 4 and claim 5, which depends from claim 4, recite limitations that further distinguish over the references. Claim 4 recites: both “registering a binding update failure with regard to the first binding update issued to the correspondent node at the first correspondent node address” and “issuing a naming query requesting a current address of the correspondent node.”

Claim 5 recites further acts within the method. This method allows two nodes to continue communication, even if both change addresses (p. 21, lines 8-12). Though paragraph 97 of Kempf is cited as teaching a binding update failure, Kempf relates to securing a binding update. It does not teach issuing a naming query, as in claim 4 or receiving a naming query response, as in claim 5. For this additional reason, claims 4 and 5 should be allowed. Claims 14 and 15 recite similar limitations and should also be allowed.

CONCLUSION

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, the Director is hereby authorized to charge any deficiency or credit any overpayment in the fees filed, asserted to be filed, or which should have been filed herewith to our Deposit Account No. 23/2825, under Docket No. M1103.70179US00.

Dated:

January 14, 2009

Respectfully submitted,

By

Edmund J. Walsh

Registration No.: 32,950

WOLF, GREENFIELD & SACKS, P.C.

Federal Reserve Plaza

600 Atlantic Avenue

Boston, Massachusetts 02210-2206

617.646.8000